PATENT ABSTRACTS OF JAPAN

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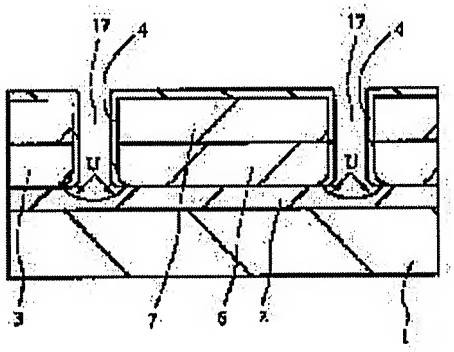
(54) MANUFACTURE OF SEMICONDUCTOR INTEGRATED CIRCUIT DEVICE

(57)Abstract:

PURPOSE: To relax the base of a U-shaped groove provided onto the surface of an SOI substrate in distortion so as to restrain crystal defects from occurring in a semiconductor integrated circuit device wherein the surface of the SOI substrate is isolated by insulation with a U-shaped groove for the formation of an element.

CONSTITUTION: When A silicon layer 3 and an epitaxial layer 7 formed on the surface of an SOI substrate are etched for the formation of an element isolating U-shaped groove 17 which reaches a lower silicon oxide film 2, the silicon oxide film 2 on the base of the U-shaped groove 17 is isotropically etched to provide an undercut U to an interface between the silicon oxide film 2 and the silicon layer 3. The undercut U serves to absorb and relax distortions generated at the base of the U-shaped groove 17 when a silicon oxide film is formed on the side face of the U-shaped groove 17 by thermally treating the SOI substrate.



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